

## **815 KAR 20:070. Plumbing fixtures.**

RELATES TO: KRS 318.010, 318.015, 318.150, 318.200

STATUTORY AUTHORITY: KRS 318.130

NECESSITY, FUNCTION, AND CONFORMITY: KRS 318.130 requires the department, after review by the State Plumbing Code Committee, to promulgate an administrative regulation establishing the Kentucky State Plumbing Code regulating plumbing, including the kind, type, and quality of plumbing fixtures to be used in the construction of plumbing systems. This administrative regulation establishes the requirements for plumbing fixtures allowed in Kentucky.

Section 1. Materials. Receptacles used as water closets, urinals, or for the disposal of human excreta, shall be of vitrified earthenware, hard natural stone, or cast-iron with a light color porcelain enameled on the inside, except as established in Section 4 of this administrative regulation.

Section 2. Installation. Plumbing fixtures shall be installed to allow access for cleaning.

- (1) All pipes from fixtures shall be run to the wall.
- (2) A trap or pipe shall not extend nearer to the floor than twelve (12) inches except laundry trays or similar fixtures.

Section 3. Water Closet Bowls. (1) A water closet bowl shall be of one (1) piece construction and hold a sufficient quantity of water when filled to the trap overflow to prevent fouling of its interior surfaces.

- (2) A water closet bowl shall be provided with an integral flushing rim to flush the entire interior of the bowl.

Section 4. Plastic Water Closet Bowl and Tank. (1) A plastic water closet bowl and tank shall be constructed with a polypropylene lining inside the one (1) piece bowl and tank.

- (2) The outer surface of the bowl shall be constructed of PVC material.
- (3) The filler material between the lining and outer surface shall be made of polyurethane foam.
- (4) The bowl shall have:
  - (a) A three (3) inch water seal; and
  - (b) A two and one-eighth (2 1/8) inch waste opening passage.

Section 5. Frost-proof Closet. (1) A frost-proof water closet may be installed only in a building that has at least a twelve (12) inch air break between it and any building used for habitation or occupancy.

- (2) The room shall be tightly enclosed and accessible from the outside only.
- (3) The soil pipe between the trap and hopper shall be of extra heavy cast-iron, four (4) inches in diameter and shall be light colored porcelain enamel on the inside.
- (4) The building shall have a nonabsorbent floor.
- (5) A frost-proof water closet shall have a four (4) inch vent.

Section 6. Floor and Shower Drains. (1) A floor drain or a shower drain shall be considered a plumbing fixture and shall be provided with a strainer.

- (2) Shower drain pan construction.
  - (a) A shower pan shall be constructed without a seam and shall extend to a minimum height of six (6) inches on all vertical walls.

- (b) A shower pan shall not be required on a concrete floor before the outside grade level.
- (c) A shower drain pan shall be constructed of:
  - 1. Sheet lead weighing not less than four (4) pounds per square foot;
  - 2. Nonplasticized chlorinated polyethylene produced and labeled as ASTM D-412 and D-1204, which shall be not less than 0.040 inches thick;
  - 3. Nonplasticized polyvinyl chloride (PVC) sheet material produced and labeled as ASTM D-1004, D-412, 06A, and D-1790, which shall be not less than 0.040 inches thick; or
  - 4. Other approved material as established in 815 KAR 20:020, Section 5. Copies of ASTM specifications identified in this administrative regulation may be obtained by writing the American Society for Testing Materials, 1916 Race Street, Philadelphia, Pennsylvania 19103.
- (3) Fiberglass bathtubs, showers, tub enclosures, and shower stalls.
  - (a) Fiberglass bathtubs and tub enclosures shall be produced and labeled as ANSI Z 124.1.
  - (b) Acrylic-faced bathtubs shall be produced and labeled as ASTM E8408A or E 162.
  - (c) Fiberglass shower stalls and shower receptors shall be produced and labeled as ANSI Z 124.2.
- (4) Metamorphosed carbonate aggregate polyester resinous matrix-marbleoid bathtubs, lavatories, and shower stalls.
  - (a)1. Metamorphosed carbonate aggregate polyester resinous matrix-marbleoid bathtubs shall be produced and labeled as ANSI Z 124-1.
  - 2. Lavatories shall be produced and labeled as ANSI Z 124-3.
  - 3. Shower stalls shall be produced and labeled as ANSI Z 124-2.
  - (b) Copies of ANSI specifications identified in this administrative regulation may be obtained by writing the American National Standards Institute, 1430 Broadway, New York, New York 10018.

Section 7. Fixture Strainers. (1) A fixture, other than a water closet or a pedestal urinal, shall be provided with a strainer.

(2) The outlet area of the strainer shall not be less than the interior area of the trap.

Section 8. Fixture Overflow. The overflow from a fixture shall be optional, but if used, the overflow shall be connected to the inlet side of a trap and accessible for cleaning.

Section 9. Fixture Additions. A fixture added to a plumbing system shall be installed to comply with all applicable sections of the State Plumbing Code.

Section 10. Defective Fixtures. If a newly installed fixture is found to be defective or if an old fixture is found to be in an unusable condition, it shall be repaired, replaced, or removed within thirty (30) days upon written notice from the office.

Section 11. Water Heaters. (1) A water heater shall be properly connected to the hot and cold water supply.

(2) A water heater designed for use as an appliance for supplying potable hot water for domestic or commercial purposes may be used for space heating if the water temperature does not exceed 140 degrees Fahrenheit.

(3) Every water heater shall be accessible for inspection, repair, and replacement.

(4)(a) If a water heater is installed in a crawl space after September 1, 2006, it shall have adequate access with a travel path no less than five (5) feet of vertical distance and be installed on at least a two (2) inch thick noncorrosive material adequate to support the heater.

(b) The replacement of a water heater that was originally installed in a crawl space prior to

September 1, 2006 shall not require compliance with the vertical distance requirement of this subsection.

(5) If a water heater is located in an attic of a residence, a water tight pan of corrosion resistant material shall be installed beneath the water heater and shall be equipped with at least a three-quarter (3/4) inch drain to be piped similarly to a pressure and temperature relief valve discharge line.

(6) A fuel-fired water heater shall be connected to a flue or chimney of a size that shall be at least as large as the size required by the water heater manufacturer's instructions.

(7) A fuel-fired water heater vent shall not be connected to a flue serving a coal-burning apparatus.

(8) The flue or chimney shall extend two (2) feet above the roof and shall be properly flashed and shall not terminate within six (6) feet of a door or window.

(9) A fuel-fired water heater, with the exception of those having direct-vent or through the wall vent systems, shall not be placed in any bathroom, toilet room, or a room used for sleeping.

(10) If a fuel-fired water heater is placed in a closed room or closet, the door shall be a louver door or shall be properly ventilated to provide combustion air and circulation in accordance with the Fuel Gas Code incorporated by reference in Chapter 35 of the Kentucky Building Code filed in 815 KAR 7:120.

(11) Direct venting system location.

(a) A residential gas-fired direct vent and through the wall type water heater shall be vented in accordance with the manufacturer's recommendations and shall be installed in accordance with the Fuel Gas Code incorporated by reference in the Kentucky Building Code filed in 815 KAR 7:120.

(b)1. The vent terminal of a direct vent appliance with an input of 50,000 BTU per hour or less shall be located at least nine (9) inches from any opening through which flue gases could enter a building.

2. An appliance with an input over 50,000 BTU per hour shall require a twelve (12) inch vent termination clearance.

(c) The bottom of the vent terminal and the air intake shall be located at least twelve (12) inches above grade.

(12) An instantaneous water heater not listed in 815 KAR 20:020 shall:

(a) 1. Be certified to ANSI Z21.10.1 for units including but not exceeding 75,000 BTUs; or

2. Be certified to ANSI Z21.10.3 for units exceeding 75,000 BTUs;

(b) Have a minimum of 3/4 inch inlet and outlet;

(c) Be installed with a properly sized pressure relief valve not exceeding 150 pounds per square inch; and

(d) If required by the manufacturer to be periodically flushed, be installed to flush without altering the installation.

(13) Temperature and pressure relief valves shall be installed in accordance to manufacturer's requirements.

Section 12. Conservation of Water. (1) Conservation of hot water.

(a) Showers. A shower used for other than safety reasons shall be equipped with an approved flow control device, which shall limit the total flow to a maximum of two and one-half (2.5) gallons per minute per shower head.

(b) Lavatories.

1. Lavatories in restrooms of public facilities shall be equipped with an outlet device, which shall limit the flow of domestic hot water to a maximum of 0.75 gallons per minute.

2. Lavatory faucets (other than those in restrooms of public facilities) shall be equipped with a flow control device, which shall limit the flow of domestic hot water to a maximum of two (2.0) gallons per minute.

3. Sink faucets shall be equipped with a flow control device, which shall limit the flow of domestic hot water to a maximum of two and one-half (2.5) gallons per minute.

(2) Conservation of cold water.

(a) Showers. A shower used for other than safety reasons shall be equipped with an approved control device to limit the total flow to a maximum of two and one-half (2.5) gallons per minute per shower head.

(b) Lavatory and sink faucets.

1. Lavatory faucets. Lavatory faucets shall be equipped with a flow control device, which shall limit the flow of the domestic cold water to a maximum of two (2.0) gallons per minute.

2. Sink faucets. Sink faucets shall be equipped with a flow control device, which shall limit the flow of domestic cold water to a maximum of two and one-half (2.5) gallons per minute.

(c) Water closets. A water closet shall not be installed in a facility or building unless it is of a type designed and manufactured to limit the gallons per flush as required by this subsection.

1. Residential (private use) installations. A water closet for private use in a single family dwelling, duplex, or townhouse, condominium or apartment unit shall not exceed one and six-tenths (1.6) gallons per flush.

2. Commercial (public use) installations. A water closet for public use, including a commercial building, shall not exceed three and one-half (3.5) gallons per flush.

(d) Urinals. A urinal shall not exceed one (1.0) gallon per flush.

(3)(a) The provisions of this section shall apply to new construction, renovation, or replacement in an existing structure.

(b) Upon compliance with the requirements of this section, the Division of Plumbing shall permit the installation of a tank type water closet equipped with devices found by the inspector to meet applicable specifications in water closets having a tank capacity in excess of three and one-half (3 1/2) gallons (thirteen and three-tenths (13.3) liters).

(c) The Division of Plumbing shall allow the use of a standard flush water closet and a urinal that does not meet the specific specifications if the configuration of the building drainage system requires a greater quantity of water to adequately flush the system, or if the owner requests the use of antique fixtures that would not be equipped for reduced flow. (Recodified from 401 KAR 1:040, 7-5-1978; Am. 8 Ky.R. 361; 769; eff. 1-6-1982; 9 Ky.R. 46; eff. 8-11-1982; 833; eff. 2-2-1983; 1237; eff. 6-1-1983; 10 Ky.R. 453; eff. 11-2-83; 11 Ky.R. 73; eff. 8-7-1984; 13 Ky.R. 785; eff. 11-11-1986; 1940; eff. 6-9-1987; 16 Ky.R. 1270; eff. 1-25-1990; 19 Ky.R. 1002; 1387; eff. 12-8-1992; 20 Ky.R. 3117; eff. 7-7-1994; 21 Ky.R. 1391; eff. 1-9-1995; 2533; eff. 6-1-1995; 23 Ky.R. 3975; eff. 6-25-1997; 32 Ky.R. 2365; 33 Ky.R. 406; eff. 9-1-2006; 35 Ky.R. 2588; 36 Ky.R. 85; eff. 7-29-2009; 37 Ky.R. 2759; eff. 8-5-2011; 41 Ky.R. 169; eff. 9-24-2014.)